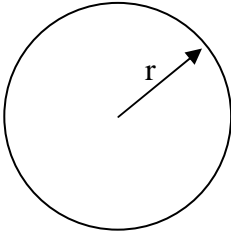


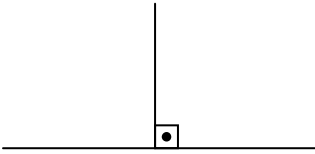
7. Rappels de géométrie

I) Le disque :



Aire : Périmètre :

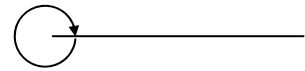
II) Les angles :



Angle **droit** :



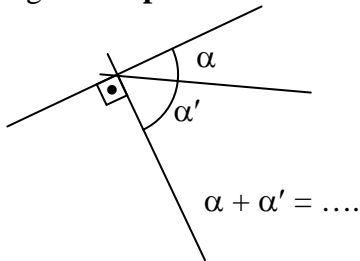
Angle **plat** :



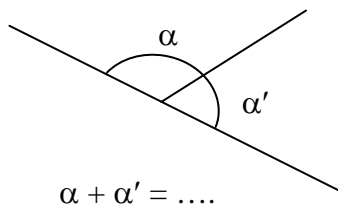
Angle **plein** :

- ❑ On appelle angle **aigu** un angle dont la mesure est comprise entre 0 et 90°.
- ❑ On appelle angle **obtus** un angle dont la mesure est comprise entre 90 et 180°.
- ❑ On appelle angle **rentrant** un angle dont la mesure est comprise entre 180 et 360°.

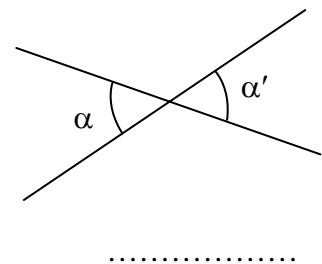
Angles **complémentaires** :



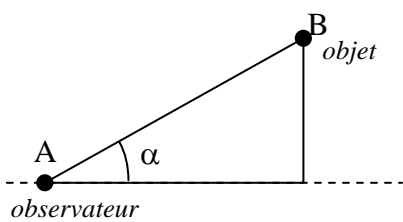
Angles **supplémentaires** :



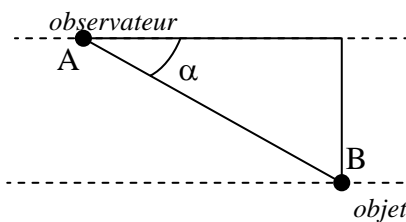
Angles **opposés** :



Angle **d'élévation** au point A :

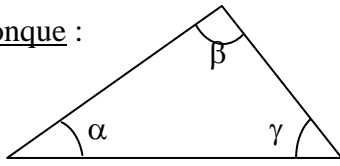


Angle de **dépression** au point A :



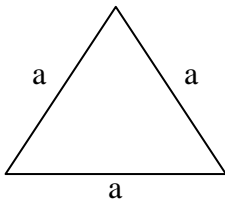
III) Les triangles :

Triangle quelconque :

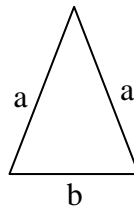


$$\alpha + \beta + \gamma = \dots\dots\dots$$

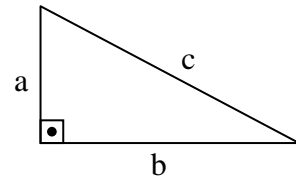
Triangles particuliers :



Triangle équilatéral
 Trois côtés égaux
 Trois angles égaux à °

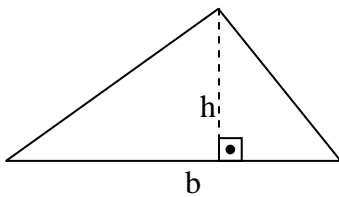


Triangle isocèle
 Deux côtés égaux
 Deux angles égaux



Triangle rectangle
 Un angle droit

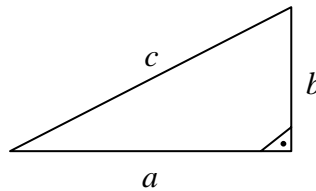
L'aire d'un triangle :



$$A = \dots\dots\dots$$

IV) Le théorème de Pythagore :

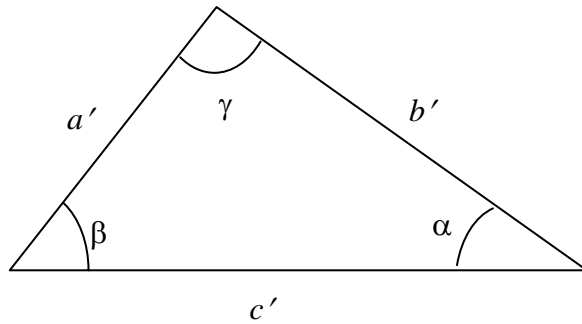
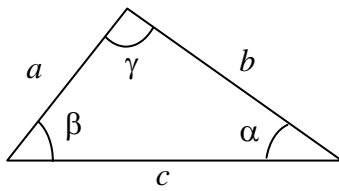
Soit le **triangle rectangle** ci-contre :



- *a* et *b* sont les **cathètes**
- *c* est l'**hypoténuse**
- On a la relation suivante, appelée le **théorème de Pythagore** :

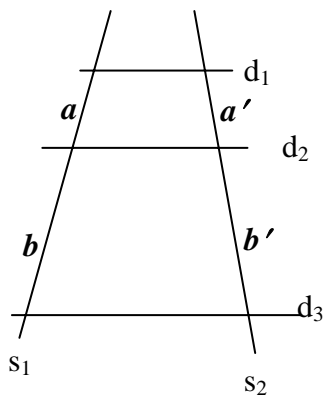
$$a^2 + b^2 = c^2$$

V) Le théorème des triangles semblables :



$$\frac{a}{a'} = \text{---} = \text{---}$$

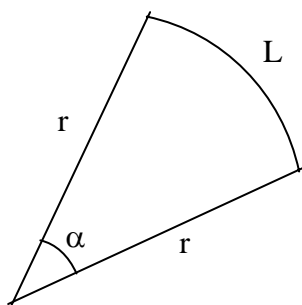
VI) Le théorème de Thalès :



Soient deux droites sécantes s_1 et s_2 .
Soient d_1, d_2, d_3 des droites parallèles : $d_1 \parallel d_2 \parallel d_3$

$$\frac{a}{a'} = \text{---}$$

VII) Le secteur d'un disque :

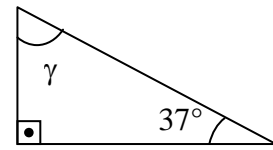
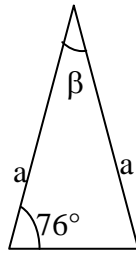
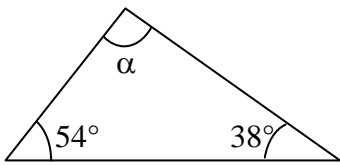


Aire : $A = \frac{\alpha}{360^\circ} \cdot \pi \cdot r^2$

Longueur : $L = \frac{\alpha}{360^\circ} \cdot 2 \cdot \pi \cdot r$

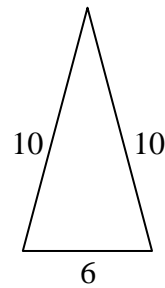
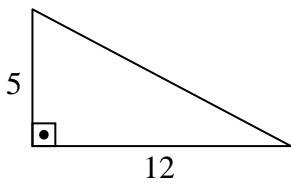
Exercices :

1) Que valent α , β et γ ?



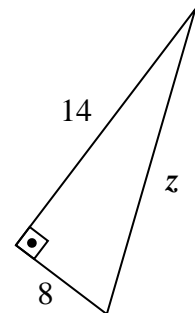
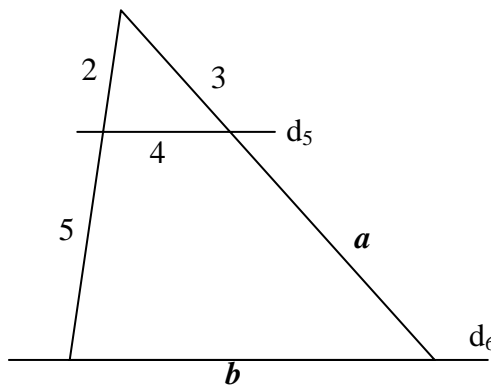
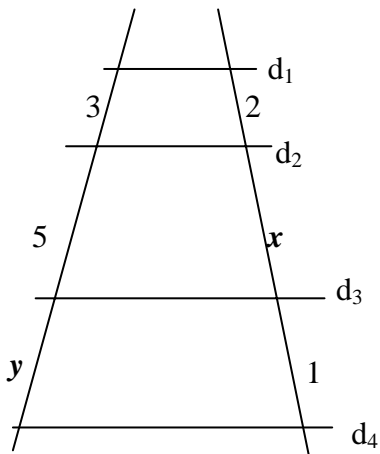
2) Calculer l'aires des triangles ci-dessous :

(Unités : le cm)

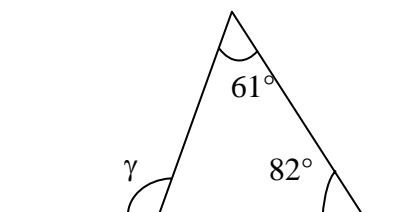
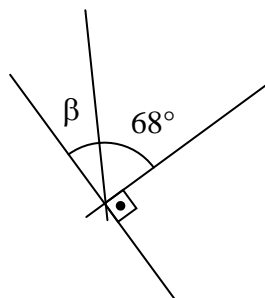
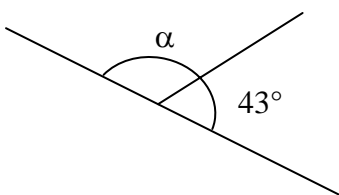


3) Déterminer les inconnues x , y , z , a et b .

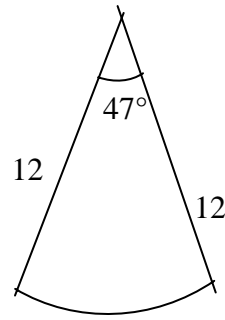
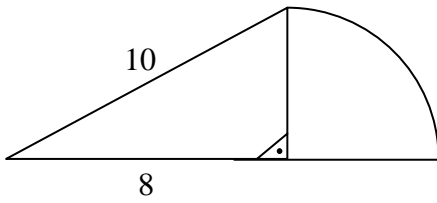
(On a que $d_1 // d_2 // d_3 // d_4$ et $d_5 // d_6$)



4) Que valent α , β et γ ?



5) Calculer l'aire et le périmètre des figures ci-dessous. (Unités : le cm)



Solutions :

1) $\alpha = 88^\circ$ $\beta = 28^\circ$ $\gamma = 53^\circ$

2) 30 cm^2 $28,62 \text{ cm}^2$

3) $x = 3,33$ $y = 1,5$ $a = 7,5$ $b = 14$ $z = 16,12$

4) $\alpha = 137^\circ$ $\beta = 22^\circ$ $\gamma = 143^\circ$

5) $A_1 = 52,26 \text{ cm}^2$ $P_1 = 33,42 \text{ cm}$ $A_2 = 59,06 \text{ cm}^2$ $P_2 = 33,84 \text{ cm}$